8348

Diag. Cht. No. 1208-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. GI-1155 *Office No.* H-8348

LOCALITY

State Massachusetta

General locality Cape Cod

Locality Chatham - Orleans(Pleasant Bay)

1955-56

CHIEF OF PARTY

R. A. Marshall

LIBRARY & ARCHIVES

DATE June 16, 1958

B-1870-1 (1)

8348

8348

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-8348

Field No. GI-1155

State MASSACHUSETTS

General locality CAPE COD

Locality CHATHAM-ORLEANS (PLEASANT BAY)

Scale 1:10,000 Date of survey 5/6/55 - 11/7/56

Instructions dated 24 May 1954; 14 Jan. 1955; 27 feb. 1955; 27 dec. 1955

Vessel GILBERT

Chief of party ROBERT A. MARSHALL

Surveyed by N.E. TAYLOR: E.W. RICHARDS: M.B. MILLER: J.S. BAKER

Soundings taken by ~~fathometer~~, graphic recorder, hand lead, ~~xxx~~ pole

Fathograms scaled by SHIP PERSONNEL

Fathograms checked by SHIP PERSONNEL & NORFOLK DISTRICT OFFICE

Protracted by W.L. JONNS

Soundings penciled by W.L. JONNS

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~ {Fathometers calibrated and are true-depths sec.

REMARKS:

HWB

U. S. GOVERNMENT PRINTING OFFICE 16—66530-1

A. PROJECT

Work covered by this report was accomplished on Project 13690 under Instructions dated 24 May 1954 ref. 22-rct S-2-PARKER issued to C.O. PARKER; Supplemental Instructions dated 14 January 1955 ref. 22-SRO S-2-GI, modified 27 February 1955 ref. 22/MEK S-2-GI; Supplemental Instructions dated 27 December 1955 ref. 22/MEK S-2-GI.

B. SURVEY LIMITS AND DATES

The area covered by this survey lies between the Nauset Beach spit and the mainland of Massachusetts and is locally known by a series of names depending on the distance north of the entrance to this bay. Each of the numerous ponds along the shoreline of this bay has a separate name as do some of waterways connecting these ponds to the bay proper. The area is bounded approximately by latitude 41°40 and 41°47 and by longitude 69°56 and ~~69°59~~ 70°00'.

Field work was started during the 1955 field season and resumed 21 August 1956 and completed on 7 November 1956.

C. VESSELS AND EQUIPMENT

Launch 172 with 808 fathometer 162 SPX was used during 1955 in the area bounded approximately by latitudes 41° 42.5' and 41° 44.0' and by longitudes 69° 58 ' and 70° 00'. Launch 175 with 808 fathometer 162 SPX and skiffs using sounding poles and leadline were used in 1956 through z-day on 9/13/56 and launch 175 with 808 fathometer 161 SPX and skiffs using sounding poles and leadline were used for the remainder of the survey.

Launchs and skiffs were operated from a shore party based at Ryders Cove where a mooring was established for the launch.

Shoal areas and low tide work was done using two skiffs lashed together and powered by one 5 horsepower outboard motorwith soundings being obtained by sounding lead or sounding pole.

D. TIDE AND CURRENT STATIONS

Tide information and location of tide gages is contained in Tide Note attached to this report.

No current stations were observed by the hydrographic party.

E. SMOOTH SHEET

Smooth sheet is to be constructed and plotted by the Norfolk Processing Office.

F. CONTROL STATIONS G. SHORELINE AND TOPOGRAPHY

Control stations, hydrographic signals, shoreline and topography were furnished by or obtained from topographic sheets T-11189 (1954) Ph 116; T-11196 (1954) ph116; T-11203 (1954) ph 116 and reports furnished by personnel completing these sheets should be referred to. Copies of these reports cannot be found aboard this vessel. (advance prints of)

Recovery and building of signals was necessary at many stations but only 3 signals were established or relocated by the hydrographic party as follows:

MUT----~~relocated by sextant fixes~~	Volume	9	page	12
CAL----Established & located	"	5	"	31
SKY----Relocated	"	15	"	44
DAD----Established & located	"	15	"	44

H. SOUNDINGS

Depths were largely measured by 808 type fathometers Nos. 161 SPX and 162 SPX. The transducer units being placed in the bilges next to the hull of the launch. No unusual corrections or methods being employed.

The area was pa rtly sounded by sounding pole and leadline because large areas of shoal water made launch operation impossible except at high tide and thick grass in certain areas caused the fathometer soundings to be too shallow. The entire days hydrography on 9/19/56 "ba"-day was redone on a later date because when passing over grass areas only fathometer soundings were obtained which are believed to be too shallow because of the grass.

A large number of soundings using pole and fathometer both were taken from the launch with the pole soundings being recorded and marked in the volumes.

No fathometer soundings were taken while operating from the skiffs.

Initial settings on the fathometers were 0.0 and frequently checked however most of the fathometer soundings were recorded with the initial switch in the OFF position and initial shown on the fathogram with the switch OFF is not the true initial setting. The initial was set at 3.0 feet during h-day on 8/3/56 and set at 0.5 feet during j-day on 8/9/56.

I. CONTROL OF HYDROGRAPHY

Sounding lines were controlled by 3-point sextant fixes on beach signals which were plotted on the boat sheet with a celluloid three-arm protractor. The control signals furnished by the photo party checked very well and no work had to be adjusted. The number of signals furnished were quite adequate for this survey and very few signals furnished were not used.

See Review, P 7A

J. ADEQUACY OF SURVEY

This survey covered an area previously unsurveyed and is complete and believed adequate for charting the area. Adequate junction was made on the southern limit of this sheet with another original survey on boatsheet GI-1156a. (H-8349 & 1956)

No holidays or excessive discrepancies were noted and the depth curves can be adequately drawn.

K. CROSSLINES

More than 10 o/o crosslines were run and crossings were satisfactory in general but since applied tide reducers for the entire area were obtained from predicted tides using only one ratio and time difference crossing differences on the boat sheet could easily be 2-3 feet caused by tide. It is believed that the smooth plotting using actual tide reducers will greatly reduce any crossing differences.

See Review, P 2

L & M COMPARISON WITH PRIOR SURVEYS AND WITH CHART

This was an original survey of an unsurveyed area and no comparison is possible.

N. DANGERS AND SHOALS

The area covered by this survey is mostly shoal with numerous channels and false channels throughout. The channels used for navigation of small boats are very poorly marked or not marked at all and local knowledge of the area is relied upon to avoid frequent grounding.

Shoals are sand and or mud flats and were adequately outlined at the time of the surveybut discussion with local fisherman, yachtsman and harbormasters indicate that the shoal areas and channels are in a constant state of change and cannot be relied upon to remain either in position or depth. No attempt will be made in this report to list the numerous shoals because of the great number and large area covered. Depth curves on the sheet adequately depict these areas.

O. COAST PILOT INFORMATION

Entrance to the area of this survey is made either by crossing Chatham Bar from the Atlantic Ocean which has a controlling depth of 6 feet on boatsheet 1156a or through Stage Harbor from Nantucket Sound. Entrance over Chatham Bar should not be attempted without an experienced pilot with knowledge of local conditions because of this dangerous bar, shoal water, changing and twisting channels and the uncertainty of bar conditions. Entrance through Stage Harbor from Nantucket Sound can be accomplished only near high tide because of shoals between Stage Harbor and the area of this survey.

Entrance from Stage Hbr. now blocked by causeway. FMa 1959

The area of this survey is used at this time almost entirely by local sport or commercial fishermen.

Contact was made with Mr. Harold Claflin who has been Chatham Harbormaster for many years. Mr. Claflin is in charge of locally maintained buoys from Chatham Bar to the Chatham Fish Pier and stated that these buoys are constantly being changed to agree with changed channels in the above area. Mr. Claflin further stated that bar conditions on the Chatham Bar are very unpredictable and change from easy to cross to impossible in 15 minutes or vice versa. This was forceably illustrated to the hydrographic party when the launch under my command was broached to and nearly lost when an unexpected breaker caught the launch on one of the very rare extremely calm days during our survey of Chatham Bar on sheet GI-1156a.

Starting at the southern limit of the area of this survey a tortuous channel can be followed to the Chatham Fish Pier which is the normal "head of navigation" for the commercial fishing boats. The final entrance to the fish pier is very narrow but has the controlling depth of 5 feet on the boat sheet to the pier. Oil, gasoline and water are available at the pier and supplies are nearby in the town of Chatham. There is some berthing space along the dock at the pier and a small anchorage basin lies just east and northeast of this pier with depths of 8-10 feet and sand bottom. The basin is well protected from winds and seas but appears to be filling in from the north.

Sport fishing and small craft operate over the entire area surveyed at high tide and numerous private coves and docks dot the western shoreline however gasoline, oil and water are available only at Ryders Cove Latitude 41° 42.3' Long. 69° 58.7' and at Meetinghouse Pond Latitude 41° 46.9' Long. 69° 57.9'. The launch party based at Ryders Cove where a mooring was placed for our use. The bottom is black sticky mud and the anchorage is well protected. A marine railway and storage shed are located here and boats 35-40 feet can be handled on the railway.

O. COAST PILOT INFORMATION (con't)

Navigation in the area of this survey north of Chatham Fish Pier is considered advisable only with local knowledge because the channels are narrow, winding, changeable and very poorly marked by locally maintained day markers held in place by small anchors.

P. AIDS TO NAVIGATION

No aids to navigation listed in the light list are maintained in the area of this survey. Numerous buoys dot the area but are subject to frequent and unannounced changes by local people. These buoys are locally maintained and only on a seasonal basis.

Numerous non-floating markers locating rocks and shoals dot the area but are maintained only by interested persons and not by any organization and cannot be relied upon.

No bridges or overhead lines or cables are located in the area of this survey. Location of submerged cables was accomplished by the photogrammetric party and no further investigation was made by the hydrographic party.

Q AND R LANDMARKS AND GEOGRAPHIC NAMES

Landmarks and geographic names were submitted by the photogrammetric party and no investigation was made by the hydrographic party.

S - X

There are no comments under these headings.

Y. MISCELLANEOUS

Tide reducers for plotting the boat sheet were obtained from the predicted tide tables using Boston as base station and applying + 2 hours 10 minutes to time and a ratio of 0.37 to high water for the entire area and it is felt that the depths shown on the boat sheet will be of small value to the smooth plotting.

During the course of the survey while sounding with the launch the bottom would change from hard sand to heavy grass and back to sand along a single sounding line. The fathometer would not sound through the heavy grass and the pole or hand lead would be used and recorded in these areas although the fathometer continued to operate and record. Normally these grass areas were encountered north of Latitude 41° 42' and in deep water however some of the flats were also grass covered. It is believed that sufficient notes were made in the sounding volume at the time these changes occured.

Z. DATA

Statistics and tide note are attached to this report. No records or reports have previously been forwarded except the tide gage marigrams.

Respectfully submitted,

Norman E. Taylor
LCDR C&GS

Approved and Forwarded:

Robert A. Marshall
CDR C&GS
CDG. Ship GILBERT

TIDE NOTE SHEET H-8348 (1955-1956)

Four portable tide gages were installed to obtain reducers for plotting the smooth sheet, however the boat sheet was plotted using predicted Boston tides corrected by + 2 hours 10 minutes and ratio 0.37 to high waters for entire sheet.

The following shows locations and data pertaining to tide gages. MLW on the staffs, time differences and areas covered were furnished by the Washington D.C. office.

Chatham Fish Pier Lat. 41° 41.3' Long. 69° 57.0' MLW on staff 3.0 ft.
Use reducers between Lat. 41° 39.8' and Lat. 41° 43.0'

Pleasant Bay (Quanset Pond) 1955 only Lat. 41° 44.2' 1955 season only
Long. 69° 58.9' MLW on staff 2.4 feet

Quanset Sailing Camps Lat. 41° 44.81' Long. 69° 58.5'
MLW on staff 0.5 feet time difference + 1 hour and ratio of heights 0.9 feet on Chatham Fish Pier. Use 41° 43.0' --41° 45.0'

Namequoit Sailing Assn. Lat. 41° 45.9' Long 69° 58.0'
MLW on staff 1.4 feet time difference + 1½ hours ratio of heights 0.9 on Chatham Fish Pier. Use between Lat. 41° 45.0' and north edge of sheet.

STATISTICS FOR HYDROGRAPHIC SURVEY H-8348 (1955-1956)

Date 1955	Day Letter	Vol	Pos'ns	Naut. Mi. Sdg.	
5/6	a	1	43	2.0	
5/9	b	1	122	10.7	
5/16	c	1-2	113	13.0	
5/20	d	2	130	14.8	
5/23	e	2	1	----	
5/25	f	2	129	11.3	
TOTALS		2	538	51.8	
1956				Launch	Skiff
8/1	g	3	11	1.6	---
8/3	h	3	44	7.0	
8/9	j	3	85	10.3	
8/10	k	3-4	127	17.0	
8/14	l	4	170	16.9	
8/15	m	4-5	189	24.0	
8/17	n	5	125	16.6	
8/22	p	6	117	13.3	
8/23	q	6	53	2.8	
8/24	r	6-7	74	7.3	
8/27	s	7	68	7.1	
8/28	t	7	59	5.6	
8/29	u	7-8	92	5.0	2.4
9/5	v	8	71	1.9	6.5
9/6	w	8-9	104	11.8	1.2
9/7	x	9	36	5.5	---
9/12	y	9	88	0.3	6.3
9/13	z	9-10	114	1.2	6.5
9/18	aa	10	86	10.1	---
9/19	ba	10-11	122	11.3	---
9/20	ca	11	65	9.4	---
9/21	da	11-12	89	6.3	---
9/24	ea	12	139	12.9	---
9/25	fa	12-13	124	5.3	4.3
10/1	ga	13	106	8.8	0.6
10/2	ha	13	9	1.2	---
10/3	ja	13-14	75	9.3	---
10/4	ka	14	80	6.2	---
10/5	la	15	59	7.2	---
10/8	ma	15	33	Bottom samples only	
10/9	na	15	26	" " "	
10/10	pa	15	48	2.3	---
10/11	qa	15	70	1.6	---
10/12	ra	15-16	71	9.0	---
10/15	sa	16	137	12.4	---
10/16	ta	16-17	76	4.0	2.3
10/19	ua	17	69	5.8	---
10/31	va	17	11	Bottom samples only	

STATISTICS (con't)

Date	Day Letter	Vol	Pos'ns	Naut. Mi. Sdg. Launch	Skiff
11/7	wa	17	12	1.4	
1956 Totals		17	3134	279.7	30.1
SHEET TOTALS		17	3673	331.5	30.1

AREA OF SURVEY IS 9.3 SQUARE NAUTICAL MILES

NORFOLK PROCESSING OFFICE
LIST OF FLOATING AIDS TO NAVIGATION

PRIVATELY MAINTAINED

BUOY	LATITUDE	LONGITUDE	DEPTH	POS. NO.	DATE
R. SPAR	41-42.58	69-58.14	7'	12f	5-25-55
R. Spar	41-42.77	69-57.13	5'	1a	5-6-55
B. Spar	41-42.76	69-57.76	4'	2a	"
B. Spar	41-42.75	69-57.80	5'	3a	"
R. Spar	~~Not plotted~~ 41-42.74	~~Swinger~~ 69-57.82	9'	4a	"
~~B.~~ R. Spar	41-42.72	69-57.84	10'	5a	"
B. Spar	41-42.67	69-58.01	3'	6a	"
B. Spar	41-42.55	69-58.15	9'	7a	"
R. Spar	Not plotted swinger			8a	"
B. Spar	41-42.42	69-58.25	9'	9a	"
B. Spar	41-42.40	69-58.41	12'	10a	"
R. Spar	41-42.30	69-58.61	7'	12a	"
R. Spar	41-42.28	69-58.64	6'	13a	"
B. Spar	41-42.27	69-58.62	6'	14a	"
R. Spar	~~Not plotted~~ 41-42.30	~~swingers~~ 69-58.70	5'	15a	"
B. Spar	41-42.30	69-58.70	7'	16a	"
B. can	41-40.23	69-56.54	12'	29ua	10-19-56
N-10	41-40.86	69-56.79	10'	71ua	"
B. keg	41-40.72	69-56.71	12'	70ua	"

BAR CHECKS - VELOCITY CORRECTIONS
Gi-1155

1955 SEASON ONLY

0.0 corr. from 0 to 15' on a,c,d,e&f days
-0.6 " . from 0 to 15' on b days

Initial was set on 0.5' on a & b days
Initial was set on 0.0' on remaining days

Initial corrections are applicable when there are variations from the above settings.

Compiled by Norfolk Processing Office.

NORFOLK PROCESSING OFFICE
LIST OF SIGNALS
H-8348

TRIANGULATION STATIONS

CON	CHATHAM CONG. CHURCH, SPIRE, 1868-1934
HUM	GREY HOUSE CHIMNEY, (B), 1920
IFS	HOUSE ON BLUFF, CHIMNEY, (A), 1920
KEN	KENT'S HOUSE CHIMNEY, 1920
MAN	CHATHAM, ROMAN CATHOLIC CHURCH, 1920
MET	CHATHAM, METHODIST CHURCH, 1920-34
NAL	ORLEANS C.G. STATION SIGNAL MAST, 1934
OLD	COAST GUARD STATION NO. 41, 1920-34
OUT	CHATHAM, SOUTH L.H., 1880-1931
POC	POCHET, 1868-1934
TAN	STANDPIPE, 1954
TAX	HOUSE ON BLUFF, CHY., (C), 1920
TER	SOUTH ORLEANS, C.E. RODGERS WATERTANK, 1934
WAT	CHATHAM, ACME LAUNDRY, WATERTANK, 1934

TOPOGRAPHIC STATIONS

SOURCE T-11189

Ans	Ape	Ask	Ate	Bat	Bit	Bug	Bur	Cab
Can	Cot	Dad	Doe	Dug	End	Era	Eva	Eye
Fan	Fat	Flu	Fog	Gas	Gat	Ger	Gob	Gun
Hit	Hot	Ike	Imp	Irk	Jea	Jig	Jil	Kel
Ket	Kin	Lap	Lin	Lux	Mat	Mit	Mum	Nib
Nip	Nor	Nox	Ore	Pam	Pug	Pun	Raz	Rib
Rio	Run	Sat	Sex	Sim	Sir	Sty	Tam	Tim
Top	Ute	Var	Vee	Wig	Wan	Yar	Yel	Zag
Zig								

SOURCE T-11196

Add	Ann	Art	Big	Bob	Bus	Cow	Cry	Cus
Dif	Dip	Dot	Dud	Ebb	Elm	Fez	Fly	Fry
Gad	Gag	God	Gul	Gus	Hat	Hop	Hut	Ice
Ida	Ivy	Jar	Jet	Joe	Joy	Key	Kim	Lad
Lop	Mag	Max	~~Mut~~	Nay	Nul	Odd	Obi	Pad
Pig	Pol	Ram	Rip	Sal	Sin	Sis	Tag	Tom
Tox	Ups	Urp	Vat	Vex	Wax	Wes	Yip	Yup
Zoo								

SOURCE T-11203

Abe	Bag	Blu	Dog	Eat	Few	Row	~~Sky~~

HYDROGRAPHIC STATIONS

Cal	Vol. 5, pg. 31 Vol. 4, pgs. 58,60 & 66
~~Mut~~	~~Vol. 9, pg. 12~~ (Topo. Pos. retained. See H 12, Field Report)
Sky	Vol. 15, pg. 44

BAR CHECKS - VELOCITY CORRECTIONS

G1-1155

Launch 175

Fathometer 162

1 Aug. to 13 Sept. 1956

-0.4'	--- 0	to 5.0'
-0.2'	--- 6.0	to 12.0'
0.0'	---13.0	to End

Launch 175

Fathometer 161

18 Sept. to 7 Nov. 1956

-0.2	--- 0	to 4.0'
-0.4	--- 5.0	to 7.0'
-0.6	--- 8.0'	to 10.0'
-0.8	--- 11.0	to 13.0'
-1.0	--- 14.0	to End

These velocity correction were compiled by the Norfolk Processing Office. The bar checks for each fathometer were grouped seperately. Index corrections were entered in the volumes when the initial was other than zero.

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8348, (Field No. Gi-1155)

GENERAL

A considerable amount of difficulty was experienced thruout the smooth plot with most all phases of this survey. The area presented a great many problems to the hydrographer because of the extremely irregular and changeable nature of the bottom and the prevalence of heavy grass, which in some areas made it impossible to read the fathograms accurately.

PROCESSING

The survey was received at this Office only partially processed. The field Party entered and checked all tides for all work accomplished during the 1955 season. Personnel of this Office entered all tides for the 1956 season's work. Tide curves were compiled from hourly heights forwarded by the field party and were supplemented by some heights requested from the Washington Office. Tide zones were delineated according to the tide note in the descriptive report.

Bar check corrections for both seasons were compiled in this Office. All fathograms were check scanned and the fathometer soundings reduced with templates.

The agreement of soundings at crossings was only fair. All pole and leadline soundings were plotted first and were frequently used as a guide to the scanner for determining the bottom in areas of heavy grass.

OVERLAYS

The following positions are being submitted on 2 overlays: 60 to 76ta, 16 to 22la, 31 to 53 la and 1 to 9pa. Information transferred to smooth sheet-overlays destroyed.

DISCREPANCIES

An unusually large number of swingers and weak fixes were encountered on this survey. Most of these were plotted on sum angle, time and course with a reasonable degree of accuracy. Those not plotted are listed below.

In addition, approximately 200 detached positions were observed on rocks, obstructions, buoys, piers etc. None of these positions had check angles, so all obstructions should be carefully reviewed and compared with air-photos or any other source material available.

Detached positions 6,11,26,27,28, 42ba were smooth plotted. The remainder of ba day was omitted as it was re-run at a later date.

All positions and soundings on "g" day were omitted as the entire day was rejected by the field party.

The following positions were not plotted because of weak fixes: 8a, 90 to 91f, 10k, 101 to 107m, 102ea, 7 to 11ka, 12 to 13ua and 72 to 80ua. rejected in field

The following positions were not plotted due to questionable fixes: ~~8~~4a, ~~15a~~, 48 & 49q. Plotted 4a. (See vol. 1, p. 6)

The following detached positions locating rocks were not smooth plotted as they fall with-in an area of rocks already adequately outlined. 2,3,5,7,10,11,15,17,18,21 & 23q.
VERIFIER INKED SOME ROCKS ON "9" day.

The following positions were plotted on the smooth sheet but some soundings were omitted because they were in disagreement with surrouning hydrography: 3 to 9c, 75 to 95f, 103 to 104k, 5 to 6 1, 152 to 153m, 28 to 30x, 63 to 64ca, 114 to 115ea & 102 to 103ea.

Very few fathometer soundings were plotted on aa day as it falls in an area of heavy grass and it was well covered on other days by pole soundings. "7a" day inked (vol. 15-16)

The field party switched back and forth from launch 175 to the skiff with-out a change of day letter or color. This condition could not be corrected with-out re-numbering most of the positions on the survey. (Not renumbered. Not corrected.) S.R.

Norfolk, Va.
6 June 1958.

Respectfully submitted,

Hugh L. Proffitt
Cartographer.

GEOGRAPHIC NAMES

Survey No. H-8348

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Massachusetts			(for title)						BGN	1
Cape Cod				"						2
Orleans				"						3
Nauset Beach									BGN	4
Chatham										5
Tern Island										6
Allen Point										7
Bassing Harbor										8
Ryder Cove										9
Crows Pond										10
Strong Island										11
Pleasant Bay										12
Round Cove										13
Quanset Pond										14
Sipson Island									BGN	15
The Narrows										16
Little Pleasant Bay										17
Hog Island										18
Hog Island Creek										19
Sampson Island										20
Broad Creek										21
Paw Wah Pond										22
Kescayo Gansett Pond										23
Frostfish Cove										24
Meetinghouse Pond										25
Areys Pond				Names approved 6-27-58						26
										27

L. Heck

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ...8348.

Records accompanying survey:

Boat sheets ..1..; sounding vols. .17..; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls .17-Envelopes

special reports, etc. 1-Smooth sheet, 1-Descriptive report....

And 2-Overlay tracings, 4-Blackline Impressions Ph-116 T-11189, T-11196, T-11203 and T-11208.

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		3673
Number of positions checked		~~1106~~ 110
Number of positions revised		7
Number of soundings revised (refers to depth only) (Note "b" and "f" days)		Several hundreds of depths revised due to tide-data revisions, and to smooth curves.
Number of soundings erroneously spaced		5
Number of signals erroneously plotted or transferred		0
Topographic details	Time	....19 hrs.
Junctions	Time	0
Verification of soundings from graphic record	Time	...16 hrs

Verification by ..... Total time 327 hrs. Date Sept. 17, '58

Reviewed by ..... Time ..51... Date 12/31/58

M-2232-1

DIVISION OF CHARTS

Review Section - Nautical Chart Branch

Review of Hydrographic Survey — Registry No. H-8348

Massachusetts, Cape Cod, Pleasant Bay

Field No. GI-1155

Surveyed - May 1955-Nov. 1956 — Scale 1:10,000

Project No. 13690

Soundings: Graphic recorder
hand lead
pole

Control: Sextant fixes
on shore
signals

Chief of Party - R. A. Marshall
Surveyed by N. E. Taylor, E. W. Richards, M. B. Miller, J. S. Baker
Protracted by - W. L. Jonns (Norfolk P.O.)
Soundings plotted by - W. L. Jonns
Verified and inked by - S. Rose
Reviewed by - L. V. Evans III — Date: 12/31/58

1. Shoreline and Control

The sources of shoreline and control are given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in adequate agreement considering the sharp slopes, which characteristically divide the shallow areas and bars from the channels and deeper regions, and the frequent occurrance of heavy grass which added to the difficulties of fathogram interpretation.

3. Depth Curves and Bottom Configuration

The customary depth curves are adequately defined.

The bottom is mostly sand or mud flats and shoals cut through by steep-sided, winding channels and false channels. The bottom is subject to continuing, extensive changes (Descriptive Report, Par. N.).

4. Junctions with Comtemporary Surveys

A satisfactory junction was effected with H-8349 (1956) to the south in the only adjoining navigable waters.

5. Comparison with Prior Surveys

H-293 (1851) 1:10,000 H-1726 (1886) 1:10,000

These prior surveys which covered that part of the present area south of about lat. 41°42' show that area to be subject to drastic changes. The extensive changes in Nauset Beach as discussed in the review of H-8349 include this area and exemplify the unstable character of the region. The present survey supersedes the prior surveys in their common areas.

The rest of the present survey is in an area not previously surveyed by this Bureau.

6. Comparison with Chart 270 (unverified compilation -new chart).

A. Hydrography

The charted hydrography originates entirely with the verified smooth sheet of the present survey. Only one change affecting the charted information was made during this review: a detached 6-ft. sounding was inked in lat. 41°43.41', long. 69°58.07'.

B. Aids to Navigation

There are no charted official aids within the limits of this survey. The many aids located by the survey are privately maintained and are subject to frequent changes as the channels shift.

7. Condition of Survey

A. The field records are complete and comprehensive, but the following deficiencies in field work are noted:

1. No check angles were measured at any of approximately 200 detached positions.

2. An excessive number of swingers and otherwise questionable fixes were found, some even at detached positions.

B. The smooth plotting was satisfactory except that too many position numbers are difficult to read, causing needless difficulty in identifying sounding data.

8. Compliance with Project Instructions

Except as noted in 7A this survey adequately complies with the project instructions.

9. Additional Field Work Recommended

This is a basic survey and no additional field work is recommended.

Examined and Approved

Max G. Ricketts
Chief, Nautical Chart Branch

Ernest B. Lewey
Chief, Division of Charts

Lorin F. Woodcock
Chief, Hydrography Branch

Samuel B. Grenell
Chief, Division of Coastal Surveys

FHC

Form 712
(11-30-55)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens 26 June 1958

Plane of reference approved in
17 volumes of sounding records for

HYDROGRAPHIC SHEET 8348

Locality Pleasant Bay, Massachusetts

Chief of Party: R. A. Marshall in 1955-56

Plane of reference is mean low water, reading

2.4 ft. on tide staff ~~at~~ (1955) at Quansett Pond

5.6 ft. below B.M. 1 (1955)

3.0 ft. on tide staff (1956) at Chatham
13.7 ft. below B.M. 1 (1952)

0.5 ft. on tide staff (1956) at Quansett Sailing Camps
5.9 ft. below B.M. 1 (1956)

1.4 ft. on tide staff (1956) at Namequoit Sailing Assoc.
15.5 ft. below B.M. 1 (1955)

~~Condition of records satisfactory except as noted below:~~

Height of mean high water above plane of reference is as follows:

Quansett Pond	=	3.2 feet
Chatham	=	3.6 feet
Quansett Sailing Camp	=	3.2 feet
Namequoit Sailing Assoc.	=	3.1 feet

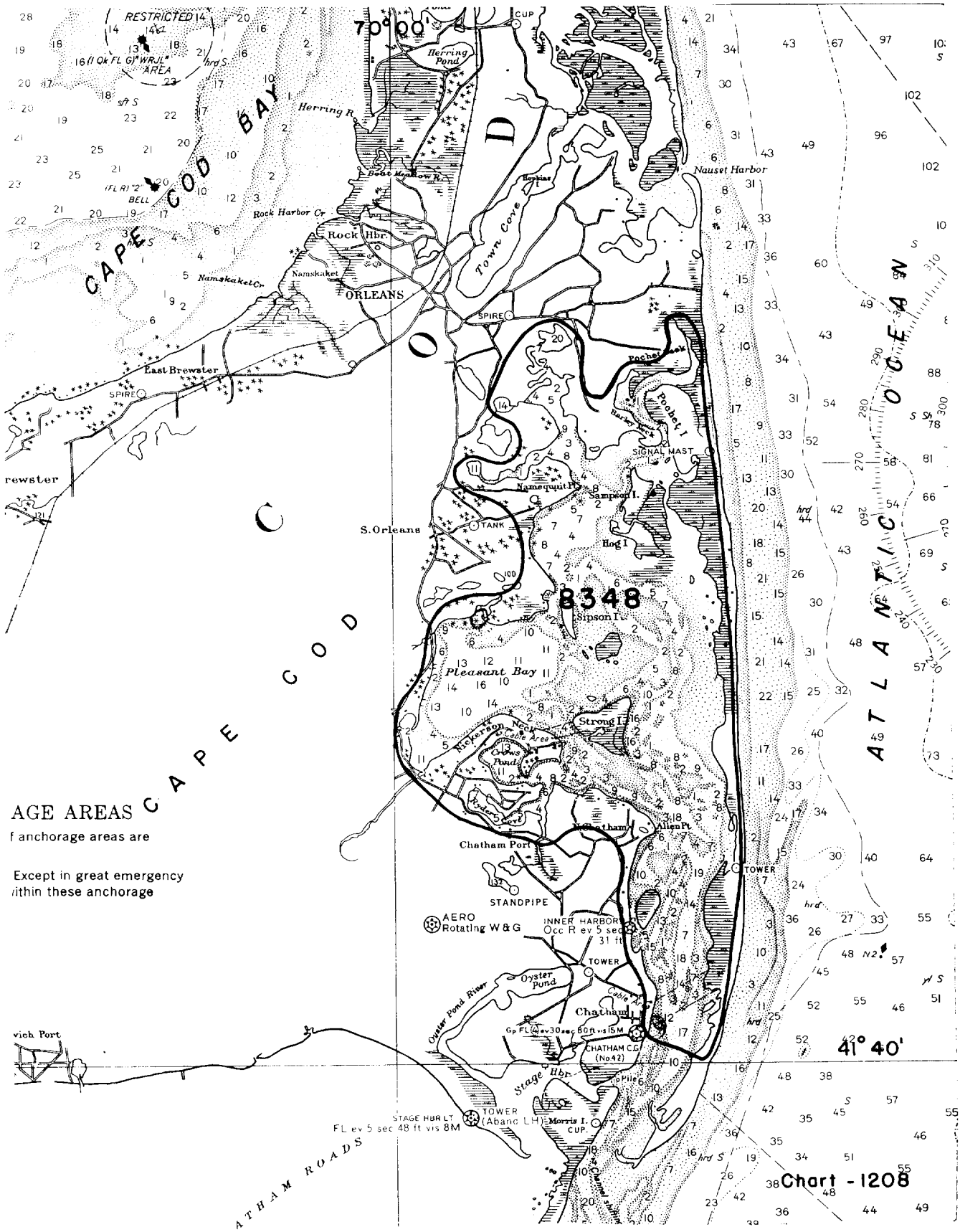
NOTE: Tide reducers for the positions listed below have been revised in red and verified:

Vol.	Positions
1	41b-120b
2	74f-129f

William Thapus
Signature

Chief, Tides Branch

Comm-DC 34330


70°00'
41°40'
CAPE COD BAY
CAPE COD
ATLANTIC OCEAN
RESTRICTED AREA
(Oc FL G) WRJL
(FL R) "2" BELL
Herring R.
Herring Pond
Boat Meadow R.
Rock Harbor Cr.
Rock Hbr.
Namskaket Cr.
Namskaket
ORLEANS
East Brewster
SPIRE
Town Cove
Nauset Harbor
Pochet I.
SIGNAL MAST
Namequit Pt.
Sampson I.
S. Orleans
TANK
Hog I.
8348
Sipson I.
Pleasant Bay
Strong I.
Crows Pond
Chatham Port
STANDPIPE
AERO
Rotating W&G
INNER HARBOR
Occ R ev 5 sec
31 ft
TOWER
Oyster Pond River
Oyster Pond
Chatham
Gp FL (4) ev 30 sec 80 ft vis 15 M
CHATHAM C.G.
(No 42)
Stage Hbr.
STAGE HBR LT
FL ev 5 sec 48 ft vis 8M
TOWER
(Abanc LH)
Morris I.
CUP.
ATHAM ROADS
AGE AREAS
f anchorage areas are
Except in great emergency
/ithin these anchorage
Chart - 1208

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8348

Record of Application to Charts

Review 12-31-58

DATE	CHART	CARTOGRAPHER	REMARKS
10/13/58	270	SAM.	Before After Verification and Review (Fully applied before review) Before After Review 3 mar
2/20/59	1209	H.C.-Andersen	~~Before~~ After Verification and Review from 270 (before ver.)
7-10-59	1205	R.K. DeLander	~~Before~~ After Verification and Review from chts 1207 & 270
2-27-61	1107	R.E. Elkins	~~Before~~ After Verification and Review Fully applied thru cht 1208 dwg 21. No revision - hydro not shown.
2-27-61	71	R. E. Elkins	~~Before~~ After Verification and Review Fully applied, thru cht 1208 dwg 21. No revision - hydro not shown.
2-27-61	70	R. E. Elkins	~~Before~~ After Verification and Review Fully applied, thru cht 1208 dwg 21. No revision - hydro not shown.
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.